

1. Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A transmitter comprising:

a quadrature modulator adapted to provide ~~for providing~~ a quadrature modulated signal from a pair of quadrature base band signals;

a variable gain amplifier adapted to provide ~~for providing~~ an amplified quadrature modulated signal;

an up-converter adapted to up-convert ~~for up-converting~~ said amplified quadrature modulated signal to a higher frequency signal;

a variable gain power amplifier adapted to provide ~~for providing~~ an amplified higher frequency signal from said higher frequency signal, said amplified higher frequency signal comprising amplitude and phase information; and

phase adjusting means for adjusting an overall phase of a transmitter chain including said quadrature modulator, said variable gain amplifier, said up-converter, and said variable gain power amplifier, said overall phase being adjusted on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.

2. (Original) A transmitter as claimed in Claim 1, wherein said transmitter is configured to operate according to a given standard that mandates that said phase changes will not exceed a predetermined value, said phase adjusting means being configured to keep said phase changes below said predetermined value.

3. (Original) A transmitter as claimed in Claim 1, wherein said transmitter chain has

an overall substantially constant gain.

4. (Currently Amended) A transmitter as claimed in Claim 1 wherein said phase adjusting means comprises a processor~~processing means~~ and said pre-stored phase information is stored in a lookup table, said processor~~processing means~~ being configured to calculate a phase adjustment value for said overall phase from gain and phase information at entries in said look-up table upon a gain change of said gain of said variable gain power amplifier.

5. (Original) A transmitter as claimed in Claim 4, wherein said phase adjusting means is a base band quadrature phase rotator rotating said quadrature base band signal prior to modulation.

6. (Original) A transmitter as claimed in Claim 4, wherein said transmitter further comprises a temperature sensor providing a temperature value, said look-up table comprises said pre-stored phase information for different temperatures, and said processor also calculates said phase adjustment value on the basis of said temperature value.

7. (Original) A transmitter as claimed in Claim 4, wherein said transmitter further comprises a battery voltage sensor providing a battery voltage value, said look-up table comprises said pre-stored phase information for different battery voltages, and said processor also calculates said phase adjustment value on the basis of said battery voltage value.

8. (Original) A phase adjuster for a transmitter comprising a transmitter chain including a quadrature modulator, a variable gain amplifier coupled to said quadrature modulator, an up-converter coupled to said variable gain amplifier, and a variable gain power amplifier coupled to said up-converter, said phase adjuster being arranged for adjusting an overall phase of said transmitter chain on the basis of pre-

stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.

9. (Original) A phase adjuster as claimed in Claim 8, for a transmitter that is configured to operate according to a given standard that mandates that said phase changes will not exceed a predetermined value, said phase adjuster being configured to keep said phase changes below said predetermined value.

10. (Currently Amended) A phase adjuster claimed in Claim 8, further comprising a processor~~processing means~~, and a look-up table, said pre-stored pre-stored phase information is stored in said lookup table, said processor~~processing means~~ being configured to calculate a phase adjustment value for said overall phase from gain and phase information at entries in said look-up table upon a gain change of said gain of said variable gain power amplifier.

11. (Original) A method of adjusting an overall phase of a transmitter chain including a quadrature modulator, a variable gain amplifier coupled to said quadrature modulator, an up-converter coupled to said variable gain amplifier, and a variable gain power amplifier coupled to said up-converter, said method comprising:

adjusting an overall phase of said transmitter chain on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.

12. (Original) A method as claimed in Claim 11, wherein said transmitter chain further comprises a variable gain band pass filter that is arranged between said up-converter and said variable gain power amplifier, said method further comprising adjusting said over all phase by taking into account gain changes of said variable gain band pass filter.

13. (Original) A method as claimed in Claim 11, further taking into account frequency changes in a higher frequency signal provided by said variable gain power amplifier.

14. (Currently Amended) A communication device including a transmitter, said transmitter comprising:

a quadrature modulator adapted to provide~~for providing~~ a quadrature modulated signal from a pair of quadrature base band signals;

a variable gain amplifier adapted to provide~~for providing~~ an amplified quadrature modulated signal;

an up-converter adapted to up-convert~~for up-converting~~ said amplified quadrature modulated signal to a higher frequency signal;

a variable gain power amplifier adapted to provide~~for providing~~ an amplified higher frequency signal from said higher frequency signal, said amplified higher frequency signal comprising amplitude and phase information; and

phase adjusting means for adjusting an overall phase of a transmitter chain including said quadrature modulator, said variable gain amplifier, said up-converter, and said variable gain power amplifier, said overall phase being adjusted on the basis of pre-stored phase information reflecting phase changes due to simultaneous gain changes of gains of at least said variable gain amplifier and said variable gain power amplifier.

15. (New) A communication device as claimed in claim 14 wherein said phase adjusting means comprises a processor and said pre-stored phase information is stored in a lookup table, said processor being configured to calculate a phase adjustment value for said overall phase from gain and phase information at entries in said look-up table upon a gain change of said gain of said variable gain power amplifier.

16. (New) A communication device as claimed in claim 14, wherein said transmitter

is configured to operate according to a given standard that mandates that said phase changes will not exceed a predetermined value, said phase adjusting means being configured to keep said phase changes below said predetermined value.

17. (New) A communication device as claimed in Claim 16, wherein said phase adjusting means is a base band quadrature phase rotator rotating said quadrature base band signal prior to modulation.

18. (New) A communication device as claimed in claim 16, wherein said processor comprises a processor and storage unit.

19. (New) A communication device as claimed in claim 15, wherein said transmitter further comprises a temperature sensor providing a temperature value, said look-up table comprises said pre-stored phase information for different temperatures, and said processor also calculates said phase adjustment value on the basis of said temperature value.

20. (New) A communication device as claimed in claim 15, wherein said transmitter further comprises a battery voltage sensor providing a battery voltage value, said look-up table comprises said pre-stored phase information for different battery voltages, and said processor also calculates said phase adjustment value on the basis of said battery voltage value.